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Design for Life: Research Methods, Design Thinking and Authorial Illustration Practice

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Design for Life: Research Methods, Design Thinking and Authorial Illustration Practice

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Image caption

Figure 1: Author's studio circa 2010, with walls used to test groupings of images.

Keywords

practice-led research
performative paradigm
research methods
authorial illustration
illustration research
design thinking

Abstract

This chapter proposes that the emerging field of illustration research embraces the methods of practice-led research, and will argue that this benefits practice outside of formal academic research. The author's practice-led Ph.D. research is the focus of an investigation of illustration methodologies within a research practice, with two interviews employed subsequently to suggest that they are transferable to professional practice. The discourse surrounding design thinking and critical thinking is drawn upon to propose that the inductive approach described here can be adopted to enable illustrators to be entrepreneurial and flexible in the face of changes to the nature of work. These methods provide long-term transferable skills, and give illustrators a robust set of methods to identify and interrogate their subject matter. In return, research can benefit from the performative forms found within illustration practice that can make its findings accessible to a wider audience.

Introduction

This chapter champions the role of practice-led research within the emerging field of illustration research, and will argue that it benefits practice outside of formal academic research. The author's practice-led Ph.D. research provides the tools that will be used to investigate illustration methodologies within a research practice. These can be adopted to complement industry-oriented, brief-led ways of working to provide long-term transferable skills, enabling illustrators to be entrepreneurial, and give them a robust set of methods to identify and interrogate their subject matter.

To begin, I will use general research concepts to position illustration in relation to existing research methods literature, specifically that concerned with the development of research in art and design that involves a practical element. This will reveal illustration to be 'fundamentally exploratory, involving innovation and risk in ways that are familiar to researchers in the broader community', a key characteristic of practice that lends itself to research (Candy and Edmonds 2010: 126). The chapter will take in a very brief outline of existing and emerging research paradigms and how illustration research relates to these, and then reflect upon how the emerging field of illustration research may be poised to contribute to the transition between paradigms through its ambitious approach to image-text relationships. Here illustration can contribute to the academic discussion of how to disseminate research findings through writing and images, showing illustration to be a valuable voice within the development of practice-led research.

Having established illustration as commensurate with inductive research the focus will shift from research on to research in illustration, commencing with an investigation of several specific methods used within my practice-led Ph.D. research. Extending the earlier discussion of research paradigms into illustration methods will be seen to raise questions that help us to articulate how practice operates differently within different strands of illustration. This will be accomplished in the forms of a commentary on how research methods terminology can facilitate discussion of illustration's link with the world and the viewer, to counter the expectations of the field and limits of existing metaphors that do not encourage us to view the world differently. Such discussion is a practical response to Mason (2000b), Bowman (2008), Poynor (2009) and Zeegen (2012, 2014) who note illustration's limited vocabulary and how this limits its link to the world it purports to speak of and to. The benefit to the study of illustration is that we can gain a clearer understanding of how it operates as a practice, and derive theoretical ideas from concerns raised by and within illustration.

I will then go on to propose that an inductive approach to research and the methods discussed therein (in particular grounded theory) can be adopted within illustration practice, which serves to reinvigorate the forms and language used as practical vehicles for outcomes. I will argue that this is of contemporary relevance to shifts in the commercial workplace, and that an inductive approach (where the outcome of a project is not fixed from the outset) represents long-term skills that equip illustrators with a flexible practice that allows them to be proactive in the development of new employment opportunities. By examining the overlap between the approach outlined here and two professional projects (from fields open to and being populated by illustrators) I will propose that an inductive approach is relevant to professional practice and society more broadly.

Illustration research in relation to existing research paradigms

In order to explore what illustration research might be I will explore the practitioner's position as a researcher within broader research paradigms. The two major traditions are summarized briefly by Rudestam and Newton (1992) as quantitative and qualitative research, differentiated by their epistemological approaches. They define quantitative research as objectivist, in that knowledge must be verified by corresponding to the real world, and research takes the form of hypothesis-testing using empirical research methods. This is not what this article is concerned with, for the process described here overlaps with qualitative research as Rudestam and Newton summarize it. Therefore it is 'constructivist', with knowledge being constructed rather than discovered (Rudestam and Newton 1992:47). It is an inductive approach, which Collins (2010: 43) explains is usually focused on understanding the context within which the phenomenon of interest sits, and is open to a variety of explanations for it (whereas a deductive approach starts from such an assumption and looks to establish a cause-and-effect relationship). In that it responds to the data continually emerging, the study can be more flexible in its evolution. This approach acknowledges the role played by practice in directing the course of the research, with methodology being emergent and responsive accordingly, as described by Barrett (2007a: 6).

Gray and Malins (2004), Haseman (2006, 2007) and Bolt (2008) position practice-led research in the arts as a separate paradigm, with its own methodological, epistemological and ontological concerns. Haseman argues for the recognition of an emerging 'performative paradigm' where the practical work produced enacts change in the world as its contribution to knowledge. The aim here is to ask questions of illustration to establish how it operates as

research, and more broadly to contribute to the definition of the artistic paradigm in order for that to reflect a variety of practices. To do so I will draw upon Gray and Malins' 'Paradigms of Enquiry' chart, which divides research into paradigms such as Positivism and Constructivism, and charts the ontological, epistemological and methodological singularities of each (2004: 20).

Illustration research is relatively new and still developing, therefore this is an appropriate time to be exploring what illustration research might be and equipping ourselves with the tools to do so. It also means that we do not have a great deal of guidance in the form of appropriate research methodologies, or discussion of ontology and epistemology with regard to illustration. Questions arising from the Gray & Malins table's relationship with illustration research include consideration of the researcher's relationship with the world, how they go about investigating it and their audience's relationship with the research materials produced. How their work negotiates this reveals underlying assumptions about these issues. Therefore the discussion here focuses on practical methods, in line with Bolt's emphasis on research-through-practice giving rise to a different mode of thinking and different theoretical insights to the 'self-conscious theorization' of ideas applied to practice (Bolt 2006).

Practical methods do not consciously follow paradigmatic lines; they follow Denzin and Lincoln's description of the methodological 'bricoleur'. The bricoleur crosses the boundaries of research paradigms with differing world-views unwittingly (and often unproblematically) in the main as part of the 'poetic making-do' borrowed from Michel de Certeau and applied to methodology (Denzin and Lincoln 2005: 4, 6). Questions arising that concern the researcher's world-view and assumptions ought to be resolved within practice as ethical issues concerning the role of the researcher (that are specific to the topic of enquiry and the illustrator-researcher's situation), rather than be dictated at paradigmatic level and adhered to as strict methodology.

Practice as research: Research *on*, *in* and *for* illustration

A variety of critical frameworks already exist for analysing finished work (research *on* illustration) and its relationship with the viewer, and therefore this chapter will concentrate instead on the production of illustration. This is the unique contribution made by practice-led research, which in its flexibility can take risks with practice that cannot be taken if studying someone else's practice. This section will examine how illustration practice operates specifically as practice-led research in art and design. In order to define this we can return to Christopher Frayling's influential 1993 article, which outlines the three categories of research in art and design, namely, research *for*, *into* and *through* practice (Frayling 1993: 5). These distinctions form the basis of contemporary discussions of practice-led research, with useful refinements contributed by Henk Borgdorff who reworks Frayling's categories into research *on*, *for* and *in* the arts. The latter category is 'when the research unfolds in and through the acts of creating and performing' and uses the practice as the 'methodological vehicle' for the study (Borgdorff 2010: 46). These terms will be adopted hereafter. Borgdorff does not neglect the contribution made by the previous two forms of research, which is particularly relevant to the current requirements for doctoral research to produce a written thesis, which articulates the non-linguistic aspect of creative practice that is the focus of research *in* for Borgdorff. This chapter takes into account the production of illustration to reflect Borgdorff's research *in* art. It will not investigate research *for* illustration, for as Stephen Scrivener (2010: 261) points out, this aspect of arts-based research 'is not required to yield new knowledge and understanding ... [it] does not satisfy the goal condition of

academic and professional research'. This point will be revisited later in the chapter, however.

With regard to the most appropriate term available to describe this research *in practice*, Carole Gray's definition of practice-led research is succinct:

research which is initiated in practice, where questions, problems, challenges are identified and formed by the needs of practice and practitioners; and secondly, that the research strategy is carried out through practice, using predominantly methodologies and specific methods familiar to us as practitioners in the visual arts. (Gray 1998: 3)

This definition is declared still fit for purpose within recent discussions of how practice-led research is developing such as Brad Haseman's 'performative paradigm' for creative research (Haseman 2007: 147). First, the distinction between practice-based research and practice-led research is of use in examining research on by way of research in illustration, in order to describe the different roles taken by practice within one enquiry. Linda Candy draws a distinction between the two, where the former results in practical outcomes and the latter's contribution is presented in written form (Candy 2006: 18–19).

Illustration and paradigm shifts: Writing and the location of the argument

The question raised above of where the argument lies is particularly pertinent to illustration research, and may be where it can contribute to the development of research that awards a contributory role to the practice in carrying some of the burden of making an argument. In recent developments, Haseman's performative paradigm places the emphasis on the practical outcomes as the appropriate language to convey the knowledge gained within and through practice, and suggests that the words and numbers of qualitative and quantitative traditions will therefore lose some of this knowledge in the translation between modes (Haseman 2007: 148). This sounds like an argument for using images rather than describing them in written research articles, and corresponds with the view of Rob Mason and Russell Mills who trace the term back to its Latin root *illustrare* to argue that the role of illustration is that of enlightening and therefore operational (Mason 2000a:4; Eno and Mills 1986: 6).

The relationship between practical knowledge and written language used to express it within the requirements of a Ph.D. is also discussed by MacLeod (2000), Bolt (2007: 31), Niedderer and Roworth-Stokes (2007: 2, 12), Smith and Dean (2009: 7), and Newbury (2010: 375, 383–84). It would be pertinent for illustration (particularly at this point in the development of practice-led Ph.D.s) to adopt the balanced conclusion from Candy and Edmonds (2010), Newbury (2010) and Bolt (2007) that the artistic artefact cannot operate alone. However, where it can add to the discussion is by incorporating visual work within the thesis in a manner that offers both the performative approach of Haseman as well as the strengths of the traditional written thesis. Therefore, illustration, with its singular relationship with text (as extension, counterpoint or redirection as discussed by Braund 2011, for example), offers us the possibility of contributing to a transitional stage between the paradigmatic columns of Gray and Malins' table, that is, from qualitative research to performative paradigm.

This is a reasonable position to adopt in relation to the current development of illustration research, in that the findings must communicate clearly to an audience that includes those who view the purpose of illustration differently. The written element makes the role of

illustration *as* research apparent to this segment of the audience and beyond. Therefore, although my written thesis did not operate in the way that I am arguing illustration should (specifically in terms of the relationship between illustration and words within the written thesis), it offered an insight into the role of practice in arriving at that point. However, I would argue for greater responsibility to be given to practice in the communication of knowledge *within* a written document. As Candy and Edmonds (2010: 121) state in relation to practice-based Ph.D. research: 'the text that accompanies the work may indeed illuminate new apprehensions or a new way of creating apprehensions that we can claim as the new knowledge produced'. And here the use of the term 'illuminate' is key; to return to Mason and Mills (Mason 2000a: 4; Eno and Mills 1986: 6) this is the task of illustration.

This suggestion is informed by Katy MacLeod who, in defining three different approaches to practice-led research, gives the example of a Ph.D. submission that employed practical work and writing in a complementary relationship. She states that: 'in type C it [the written text] is instrumental and complementary to the artwork submission but the artwork here *is* the thesis; it provides the theoretical proposition' (MacLeod 2000). In this sense the constituent parts of the submission constitute an argument by contributing their own role, reminiscent of the multimodal texts explored by Zoe Sadokierski in her Ph.D. research. It is specifically the Ph.D. exegesis in the transitional period between paradigms that stands to benefit from the more open approach to image–text relationships as suggested in MacLeod's example.

Examples such as Catrin Morgan's book *Phantom Settlements* (produced in conjunction with Mireille Fauchon and design studio Julia) demonstrate the possibilities here, and (as outlined in Morgan 2011) this one does so by using image, text and design to demonstrate the trajectory of deception (the focus of Morgan's research). To explain; in an early chapter ('Creation') the choice of line and writing style is precise and clear cut, which is in contrast to the later chapter 'Confabulation' where the repetitive structure of the book becomes apparent, in that this chapter is largely similar to the previous example in content but has lost its visual clarity. In this regard, both image and text become vague and imprecise to reflect the lack of certainty in recollections. Therefore, illustration can do as well as tell in paper-based combinations of words and pictures, but it is important to recognize that this is not the same as saying that the practical work produced during the research necessarily embodies the argument. It is instead suggesting that the skills to do so have been identified and could be put to use in creating a new outcome that negotiates a performative relationship between the work produced and the written text. These practical skills need to be embraced courageously as the means to convey an argument, and also as the basis for its structure. The reticence to do so in an academic environment is reflected in Elizabeth Price's honest acknowledgement that the written component of the practice-led Ph.D. submission is troubled by issues of narrative and logical sequences. In turn, insightful and particular practice is constricted by the demands of elegant draughtsmanship. She summarizes this by referring to her writing as 'never as sharp as the boulder [the practical element of Price's Ph.D.], but nonetheless, it is always so much more plausible' (Price 2006: 131). Writing, if privileged over images, therefore dictates the location of the argument and also the nature of the arguments that can be made.

Plausible practice: Research methods *in* illustration

The preceding paragraphs have outlined the role of practice within illustration research, with the emphasis so far being on research on by way of research in illustration (where the object of enquiry is illustration itself). This is the reflection-*on*-action and the reflection-*in*-action of Donald Schön's 'reflective practitioner' (Schön 1983, in Gray and Malins 2004: 22).

The discussion will now turn to reflection-in-action of practice in an examination of specific research methods, with an additional commentary reflecting upon how these may encourage us to consider where illustration (and practices within it) intersects with the paradigmatic columns and ontological, epistemological and methodological rows of Gray and Malins' table.

By moving the discussion towards the methods employed to investigate a phenomenon of interest within research *in* illustration I hope to outline the benefits for practice outside of formalized research, as a response to Mason (2000b), Bowman (2008), Poynor (2009) and Zeegen (2012, 2014). These sources, between them, question the continuing prevalence of illustration as a pleasant visual hum divorced from weighty/any content in the world it could operate within and in response to. Whilst there is room for different forms of illustration in circulation, to increase the variety of that we produce and are surrounded with I propose the inductive approach to research could be adopted within illustration practice as research *for* illustration. This may encourage illustrators to negotiate a more insightful and sympathetic relationship with the world and the phenomenon of interest identified within it, thus linking the ontological, epistemological and methodological concerns of Gray & Malins' table with the various strands of illustration within the contemporary workplace. Methods described in the following sections are derived from the studio practice undertaken as part of my doctoral research, and are therefore singular to that particular endeavour and are not an exhaustive survey of the methods available to the practitioner-researcher. The aim is not to create a prescriptive set of methods, but to develop the discussion of transferable illustration methods, beginning with scrutiny of how illustrators investigate the world and communicate their findings.

Fieldwork

The different uses of drawing as a tool to investigate a phenomenon of interest are the focus here, arising from studio practice (where drawings can take detours into new ideas, through moving from transcription to ideation) and drawing trips that produced material such as observational drawings and annotations in sketchbooks. The latter represents fieldwork undertaken as a naturalistic enquiry according to Rudestam and Newton (1992: 42), but the observer is not at all detached in the way that they describe traditional ethnographic enquiry. This may be a reflection of the shift described by Guba and Lincoln (2005: 204–05) from the positivist notion of an objective reality towards a more postmodern understanding of the socially constructed and fluid nature of reality. However, the overlap between this position and the rise of the phenomenon of 'post-truth' as outlined by Calcutt (2016) will be need to be considered carefully by conscientious researchers. More recent research methods texts have responded to and developed Rudestam and Newton's summary of ethnographic fieldwork to reflect the role of the researcher who is enmeshed within the data, and using this variety of approaches from other disciplines to interrogate how illustrators undertake fieldwork is a particularly useful exercise. For example, how these differing approaches are manifest within drawing is interesting from an illustration perspective, for how the practitioner negotiates the concept of representational veracity will reveal their position. This may be different for practitioners of reportage, socially-engaged participatory practices, or children's books for example, and open up debate within these areas as to what is effective for investigating the world. Therefore we may use such concepts from the discussion of research methods to map the field of illustration with greater subtlety.

Fieldwork undertaken through the course of the Ph.D. largely took place within sketchbooks: a vehicle discussed within research methods texts and with its own influence on practice. The sketchbook is listed by Gray and Malins (2004: 111) as a practical method validated by previously completed Ph.D.s. It is of note here due to the visual nature of the thinking it encourages. It provides a useful tool to encourage stepping into areas of uncertainty or uniqueness, largely because it is semi-private and fosters experimental or unplanned activity that may lead outside the entrenched behaviour noted by Schön. This is the 'ideational drawing' that Terry Rosenberg writes of. He describes it as a 'thinking space – not a space in which thought is re-presented but rather a space where thinking is presented'. These drawings are the detours in subject matter and method that emerge from flights of fancy within the sketchbook, and also the visual exploration of possibilities (for compositions, or three-dimensional works, for example) that occupy a problem-solving role. Rosenberg characterizes this approach to drawing as: 'where one thinks with and through drawing to make discoveries, find new possibilities that give course to ideas and help fashion their eventual form' (Rosenberg 2008: 109). Therefore, this is drawing that is generative of ideas and new tangents for enquiry rather than transcribing existing ideas, and it acts as a record of the thinking and making process. The reflective journal (also on Gray and Malins' list, 2004: 113) offers a similar informal and exploratory space that facilitates reflection-on-action and a record of the project's trajectory. Gray and Malins refer to it as 'a much more structured and deliberate research method' than the sketchbook, and although this overlooks the variety of exercises that go on in my sketchbooks, their description of the journal as a growing archive that will be consulted regularly is appropriate. My use of sketchbooks involves a cycle of reflection and adjustment (through duplicating and reworking its contents into further work and new sketchbooks), and therefore their description of the reflective journal could be stretched to accommodate sketchbooks.

Reflective practice: Thinking through making

Materials amassed during fieldwork require further sorting and reprocessing in the studio. Practical strategies employed within the studio involve using wall space to hang, review and reshuffle the work produced in order to identify themes and clusters of images; a process referred to as the 'unbound journal' by Nadeesha Godamunne (Ings 2016: 141) and represented in figure 1. These might form a new conceptual anchor for the project or angle on an existing starting point, allowing for the project to diverge from the brief or initial concept and shed new light on the topic. This process can be described using Donald Schön's 'reflective practice'. Gray and Malins (2004: 22–23) and Haseman (2007: 152–53) both explore Schön's ideas in relation to practice-led research, with the former quoting Schön to describe the design process as a 'reflective conversation with the materials of the situation'. This adequately describes the trials, reviews and adjustments seen on the studio walls where images are organized, compared, adjusted and sometimes discarded in the ongoing negotiation of aims, methods and outcomes. Haseman's exploration of Schön's 'reflective practice' within practice-led Ph.D.s shows it to provide the opportunity to make clear underlying assumptions of the practitioner that go largely unquestioned in daily practice (especially if they remain hidden in sketchbooks). For these can become stifling and lead to repetitive work (Schön's term for this is 'overlearning'), which was the problem identified in illustration criticism cited earlier. The key point is the possibility this affords for stepping outside the rote application of a familiar design process and into unknown territory by employing new methods within the process.

Reflective practice is therefore the bridge between practice and research-through-practice. It encourages the translation of tacit understanding into the explicit and transferable, and in

doing so Schön states that reflective practice enables the practitioner to 'make new sense of situations of uncertainty or uniqueness which he may allow himself to experience' (Schön 1983: 61, in Haseman 2007: 153). Uncertainty can be greeted with confidence when equipped with a robust set of recognized methods, which are expanded upon by Haseman. The ongoing review and adjustment of work in progress within such situations is described in terms of the enquiry cycle borrowed from action research that facilitates self-reflection and development in its cyclical stages of planning, action, observing, reflecting, replanning and so on (Haseman 2007:142).

Grounded theory – curating the materials amassed

Materials collected through fieldwork and sketchbook exploration need to be analysed as thoroughly as interview data, and grounded theory from qualitative research can be used to explain this process as described in the previous section. In practical terms, the process of exploring materials and themes can be seen in the printing of sketchbook images for hanging on the studio wall, where they are reviewed and given a new context (such as in figure 1). Comparisons and links between images are made, and through reshuffling images potential conceptual anchors can be tested. This then led to me curating and reworking images from this process into narrative clusters and threads for a work-in-progress exhibition.

Kathy Charmaz defines grounded theory as both the practice and the product, wherein qualitative data collection and conceptual analysis take place in an iterative cycle and result in theoretical conclusions (2005: 507). In my practice, reinterpreting my own work (through recombining elements or changing the colour, for example) is more in line with a constructivist research paradigm than with the positivist one that Collins (2010: 41) aligns grounded theory with. However, Charmaz identifies two different strands within grounded theory – a positivist approach (which is informed by the idea that theory can be found within the data) and a newer constructivist approach, which acknowledges that all of our decisions in editing and selecting have an impact when we code, categorize and summarize in relation to our data (Collins 2010: 360). The main themes of style, gaps and time that formed the structure of my Ph.D. thesis arose from this process, despite the pressure of the logic of words that governs the final structure, and which echoes Elizabeth Price's earlier comments. Collins summarizes this strategy as inductive, with theory arising from the data collected and not assumed prior to the study. Gray and Malins (2004: 22) point out that it is helpful to develop theory from within the field in this way, rather than have it as a separate activity that misses some of the specificity of practice. Grounded theory is an approach to analysis that enables this and complements other critical endeavours already underway from other perspectives.

The methods and inductive approach discussed previously are not solely of use to the academic researcher, and the discussion will now shift to outlining the wider benefits. I propose that this approach gives us the confidence to argue for and adopt an authorial approach to illustration by removing the known outcome of the traditional brief, or at least the level to which it specifies the outcome from the outset. The inductive approach outlined above can conjure new metaphors, styles and forms with which to communicate, as appropriate to each project. Furthermore, adopting this approach is beneficial to the longevity of an illustrator in a workplace with a high turnover.

Charmaz's constructivist approach is instructive in that it relinks the illustrator and world by encouraging responsibility for image-making and how images are used, and also allows

flexibility for their reinterpretation in a new context. For example, the transition from fragmented drawings in the studio in to parallel (albeit loose) narratives within exhibition space reflects my editing of materials to reflect emerging themes and potential tangents to pursue. Using and reworking existing materials in this way is of note. By having to work within the limits of what has already been pictured, a 'best-fit' approach to editing is adopted, similar to that outlined by Graham Rawle in relation to his use of existing texts to convey his own narrative (2005). The benefit is that new metaphors arise from the necessity of using the most appropriate image for a particular role, such as in my *'DEAR' artist's book* from 2010. Observational field drawings were repurposed and reworked to represent the bleak and barren end to a Dartmoor story, which in turn became the conceptual anchor for said artist's book comprising these sketchbook materials. In this respect my use of imagery from the natural world in which the story was located became metaphorical, rather than beginning with the story and selecting an off-the-shelf visual analogy in the manner of stock illustration.

The benefit of adopting the inductive approach discussed is that it enables illustrators to generate projects of their own regardless of fluctuations in the market for illustration, by having an ongoing practice to ransack. Self-initiated work can generate further work, and expand an illustrator's professional repertoire; removing the known outcome in this way results in more varied visual languages being developed as directed by the subject matter and methods used to investigate it. Furthermore, by removing the known outcome an inductive approach also leaves room for more varied forms to come from projects, if these are the most appropriate vehicle for the communication. This communicative approach to objects can be seen in the work of Matthew Richardson, such as his work for the *Half Belief* exhibition, Howard Gardens Gallery in Cardiff, 2006. Richardson's websites divide his practice between commissioned and self-directed work, yet this gallery-based practice could provide variety within the venues that host his commissioned work. The inductive approach leading to a more varied range of materials is shown in my 2d/3d vignette *The Unsung Telephone* of 2012. It is included for discussion here as it represents the use of three-dimensional objects, materials and environments as communicative practice, as Richardson's does. In this case the form was dictated by the project as it developed, rather than being defined at the outset. Using objects in communicative roles such as these complements the entrepreneurial surface decoration that has flourished in recent years, partly due to the increase in (and necessity of) opportunities to generate income such as graphic arts fairs. Equipping illustrators with a sturdy understanding of their methods is a way of enabling them to be flexible and responsive within this professional environment, with long-term skills to generate projects and operate professionally irrespective of styles and industry fortunes. Within industry the adoption of an inductive approach to research *for* illustration could broaden the range of representations in circulation, and make these better informed.

Circulating practice as research

Research outcomes need to be communicated to a wider audience, and here the discussion of practical outcomes from the process described can contribute to the expansion of discussion in earlier paragraphs concerning the role of practice in research outcomes. This is an opportunity to consider illustration's relationship with the performative paradigm proposed by Haseman (2006) and the frictions raised by using practice in making an argument. These arise because audience expectations of these outcomes differ, in that practice and research practice may be received differently. This raises questions concerning the suitability of vehicles for circulating academic research practice. Of specific note is the

importance placed upon the surface qualities of illustration, which threatens to undo the gains made within critical reflections on the field in the same way that focus on style eclipsed communication within the critical viewpoints cited earlier.

For practical outcomes the precedents exist for producing outcomes compiled from fragmented sketchbook materials. Circulating vehicles such as artists books and zines including Henrik Drescher's book works, Sara Fanelli's book *Sometimes I Think, Sometimes I Am* (2009), and zines such as Nick White's *Stuff I found...* (2009) reflect the volume of sketchbook imagery on social media and illustrator's personal websites in published form, and show that there is a pocket within the marketplace for work that looks different to the sheen seen on most stock illustration (and some agents') websites. Whilst I'd be hesitant to extrapolate to the rest of the world, the UK's zine, comic and artist's book fairs are numerous and lively and show just one possibility for creating outlets for such work, one which can be monetised and also address a wider audience outside of academia.

However, academic contributions to knowledge may result from practical mistakes and aesthetic failures, which would be edited out from professional contributions such as these. The contribution may relate to how illustration operates, and the visual outcome may be off-putting to an audience of non-academic practitioners equipped with industry-oriented criteria to evaluate visual offerings. In such instances, the aims of the research will need to be presented alongside the visual component to ensure that it is being evaluated for its success in what it is trying to achieve. Otherwise, to use Estelle Barrett's terms, the surface of the work could obscure the ideas it carried in its making and it would not operate as a 'meme' and facilitate the uptake of these ideas (Barrett 2007b: 159–61). She notes that 'the replication mechanisms that have traditionally valorised and validated creative arts practices have focussed on product rather than process', and this is particularly pressing in illustration. But the criteria associated with professional practice (product) do not accommodate productive failure, which is an integral part of research practice.

There is a role for academic journals in providing an appropriate venue for the dissemination of practical research outcomes that do not seek to operate as professional practice and instead operate effectively with a written counterpart or as part of a visual trajectory through a project. It is the appropriate place to cater to the suggestions of Lyons (2006) and Candy and Edmonds (2010). The latter emphasize the importance of informing the viewer of the research context for the artefact(s) on show, stating that 'we need to know what to look at. Then we can see whatever it is that is significant' (Candy and Edmonds 2010: 125). Lyons (2006) makes suggestions regarding how to achieve this in her reflections upon the drawbacks of exhibiting research practice. Lyons suggests that work such as this ought not to be judged as art (these are inappropriate criteria and aims by which to measure the outcomes), and therefore it ought not to be exhibited in a way that presents it as art – such as the gallery. Instead she proposes that journals dedicated to practice-led research would be a sympathetic venue. And if journals embrace a multimodal, performative approach to the research exegesis as argued for earlier, the resulting bulk of citable examples would represent a welcome argument for stretching the boundaries of what is acceptable within the practice-led Ph.D. thesis.

The world of work: tackling unknowns with design thinking

Further to its use within academic research, I will explore the relevance of this inductive approach from artistic research to the professional world, and will propose that it can facilitate the sort of "design thinking" that enables practitioners to deal with uncertainty and

ill-defined problems. The following sections pick up the thread emerging from the earlier discussion of grounded theory; that of removing the known outcome and having a solid understanding of our research methods to apply to novel situations.

Poorly-defined problems arise within writing on design thinking, with the design process that formalises design thinking set out by Watson (2015) in clear and easily practicable steps. Of particular note here is the work of Kees Dorst and Nigel Cross, key voices within the discourse. They describe design thinking as a set of skills that allow creatives to develop their own frames to throw at problems, no matter how poorly-defined (Cross 1997; Dorst & Cross 2001; Dorst 2011). Dorst (2011) identifies the use of the 'frame' in tackling these open problems, with Dorst & Cross (2001) explaining the 'frame': "the creative event in design is not so much a 'creative leap' from problem to solution as the building of a 'bridge' between the problem space and the solution space by the identification of a key concept." So there are two aspects of design thinking that map onto this discussion of research methods: solving open problems, and conjuring conceptual 'frames' to throw at them. I propose that the practice led research methods outlined earlier allow illustrators to develop such a 'frame' out of thin air, as the 'best-fit' approach to editing a pile of existing work that followed removing the known outcome (the open problem here) is representative of how to find this 'frame'. Therefore by using their ongoing self-directed practice to engage with the world, the illustrator has a bank of potentially frame-worthy concepts up their sleeves to employ in the absence of clearly-defined task.

In the example of Graham Elliott and Roswitha Rodrigues's *World in Motion* documentary (an ambitious undertaking of 5-6 years so far) we can see the practical benefits of this. Their editing methods reflect an inductive approach; although their working process involves planning and direction to accommodate the tight shooting schedule and budget, it reveals traces of this grounded theory-inflected editing process. The meticulous planning of trips to cities worldwide to interview motion graphics practitioners about their industry gives Elliott the space to respond more openly to the situation and collect a surfeit of footage from which to edit the eventual documentary from. As he explains: "we tried to go into this project without any kind of agenda. We're not going 'we're going to go to Bangkok and we're going to talk about colour because it's very colourful'. We go and we have questions kind of mapped out in a sense, but it's really about a conversation." This informs the responsive thematic analysis of footage amassed into topics (frames) such as colour, resulting in at least sixty bins of footage on Premiere. These are the result of a visual analytical process which sees Elliott filling A1 worksheets full of annotations and images printed from the footage using a small sticker printer, and reorganizing these to identify themes in a process Elliott describes as "quite organic... You can reposition them. You can start to group things and see patterns emerging". The boards also help to give an overview of the emerging whole, and to establish the flow of images within this. "It's like a visual storyboard. But a storyboard is something you do before you start shooting, whereas this is more about collecting stuff you've already shot and then playing around with it." Elliott recognizes his preference for a visual approach to organising information, likening it to collecting and organizing the cards collected from packets of tea. The relevance here being the familiarity of the process to Elliott as a designer, rather than being an imposed method from another paradigm. It also helps him to multitask across concurrent projects as discussed in relation to 2017's workload: "I did thirty-eight separate music videos in three months. I had to work out a way to take the imagery that I already had, get some indication of what I needed to find or make (or get stock footage), and do this for these projects over three months. I had boards and boards, of these thumbnail prints so I could rearrange stuff

and put things into different categories and decide which imagery was suitable for certain tracks.”

Conversation also guides the research process as participants are consulted for recommendations and treated as co-investigators to some extent. Elliott and Rodrigues have encouraged their interviewees to contribute to the archive of material by filming from their own perspective, which ultimately demands a similarly ‘best fit’ approach to editing from Elliott in that the visual coherence of the results depend on the recognizable logic of Elliott’s editing. We discussed the importance of stylistic impositions that smooth the jumps between footage in this regard, in order to create something coherent without speaking over the contributor’s voice. This suggests that the positive role of style as a unifying element that also attributes authorship in a polyvocal work is worthy of further discussion. Acknowledging the influence of the researcher in a constructivist interpretation of grounded theory reappears in Elliott’s inclusion of themselves as filmmakers within the footage as a way of acknowledging their role. He also comments on adopting strategies that help him to view the world differently and quietly unsettle any assumptions he imposes as an investigator. For example, he discusses adopting image-editing software and self-imposed challenges (such as searching out split-screen compositions within the visual environment) to make footage abstract or unexpected, to try to explore different perspectives on the places encountered. When asked about this balancing act of being open to the world but still creating a coherent creative product, Elliott acknowledges: “It’s a fine line... As a filmmaker, as a designer, I have to keep my nose out of too much design because it has to tell its own story. So I have to find ways to brand the pieces [...] to hold it together so it’s not just a collection of all this diverse stuff”.

So there is room for some unknown outcomes within this process, which is aided by the circumstances in which the film is being made. The self-directed nature of this project allows Elliott and Rodrigues to go into their interviews without an agenda; a freedom they felt wouldn’t be granted along with funding from big business. The unknown outcome is also reflected in Elliott and Rodrigues’s openness to adopting emerging platforms as appropriate. In the short term this has involved using this ongoing project as a source of income as stock footage. With regard to the longer-term outcomes for the project Elliott confirms that whilst they will produce a full-length documentary as a familiar and monetized form (through pay-per-view or subscription models), he also notes that by the time they have finished the project there may be newer mechanisms for distributing work available which require the form to be reconfigured. The inductive approach to editing the footage using different ‘frames’ informs their plan to host shorter vignettes on their dedicated Vimeo channel, representing flexibility in choosing the best form for the content and the circumstances. And the most responsive aspect of *World in Motion* is Elliott and Rodrigues responding to the theme of creativity emerging from the footage collected to frame the project, as this more universal theme gives it greater longevity than the software used by its interviewees to make their work within the frame of motion graphics... much of which will seem archaic when the documentary is complete.

Processes for a post-work world?

The example of *World in Motion* shows how traces of the inductive research process can be found in professional practice and see a practitioner (Elliott) who trained as an illustrator adapt to an authorial workplace in a related field and respond creatively to unknowns. As such it brings into discussion the wider discourse surrounding the workplace and how to prepare for its unknowns, with ramifications for using the previous sections’ findings in the

teaching of illustration. Vande Zande (2011:28-30) surveys the literature surrounding desirable skills for the 21st century workplace; in summary these are innovation and creativity, flexibility and adaptability, collaboration and working as a member of a team, problem solving and critical thinking, and communication. Furthermore, he notes that a design education helps to develop both problem solving and critical thinking, with the link between design thinking's problem-defining, problem-solving and critical thinking also made by Watson (2015). The process outlined above is a practical demonstration of the higher stages of critical thinking, as set out by Bloom's taxonomy (1956). These move from analysis to synthesis and conclude with evaluation, with Anderson et al. (2014:85) modifying the hierarchy by adding 'create' as the highest category (redefining and promoting synthesis to do so). These terms map onto the analysis of sketchbook work, synthesis of different elements (a diverse collection of images and texts) to create a new whole such as a sequential narrative or exhibition of images in series, as discussed earlier. According to the World Economic Forum, the top three most valuable traits in 2020 will be complex problem solving, critical thinking, and creativity; the emphasis here is on creativity's increasing importance; moving from tenth place in 2015 to third in 2020 (Gray 2016). Healey & Jenkins (2009) claim that employers want research skills and that they equip students to deal with change; the design thinking and critical thinking represented by the research methods described here show *how* practitioners might be trained to approach the open problem of 'change' with a reliable set of methods.

And whilst this is in danger of appearing quaint in the years following publication, change is high on the agenda at the time of writing in the form of global developments affecting the workplace, and how they will affect illustration. In his interview with John O'Reilly, Pat Kane suggests that play will be a skill required for the post-capitalist, post-market and post-work world outlined by economic commentators such as Mason (2015) and Rifkin (1995), where automation and artificial intelligence driving the evolution of traditional work into something as yet unknown (O'Reilly 2015). However, although Kane proposes that the role of illustrator as a cultural actor helping society adjust to these circumstances, he sees the old model of remuneration becoming obsolete. If his predictions are considered, illustrators will need to be flexible and able to deal with uncertainty in the transition between economic models. Furthermore, Kane emphasizes the need for them to mobilise politically to shape the terms of whatever new model of financial support emerges.

John Harris recalls Tony Blair setting out this brave new world of work in 2005, with Harris noting that "It is replete with opportunities, but they only go to those swift to adapt, slow to complain, open, willing and able to change" (Harris 2016). But as Harris points out, this isn't most people. And nor should they accept these terms unquestioningly, if Kane's perspective is adopted. Those able to flourish under these circumstances are aligned to the qualities of the entrepreneur as proposed by Levine & Rubinstein (2013:1), who will "drive economic growth by creating and introducing new goods, services, and production processes that displace old businesses". They note that entrepreneurs thrive in workplaces that demand "high levels of creative thinking, analytically advanced problem solving, and strong communication skills" (Ibid:4). These demands are equally met by the critical thinking illustrator with an awareness of their own design thinking, so it could be that more people are able to benefit from such changes than the few identified by Harris. Through creating new services they could (hypothetically, at least) be in a position to influence the nature of work as Kane proposes. The role of education in teaching the methods outlined here hopefully offers an alternative route towards entrepreneurship to that depending upon wealth and privilege, which the research summarized by Groth (2015) suggests. The following example from the expanded professional world of visual communication shows

how Levine and Rubenstein's qualities could become part of the designer's professional identity, but it also raises the question of whether clients are yet prepared to embrace the short term changes that may be helpful in securing longer term professional relevance.

Krebs and Creative Entrepreneurship

To explore this, I interviewed Leart Zogjani of design company Kokrra about a project they undertook for Dokutech 2016, which billed itself as "an inspirational and interactive annual event which brings together individuals and tech talent to meet with top-tier international future makers, executives and thinkers." This project saw Kokrra approached on the basis of a project they had executed previously, and were given the job of proposing and subsequently executing their ideas for the job of creating the visual identity for the festival through moving posters, print and web design, set design, and more. What is curious about this project is that Kokrra prepared for a month for their meeting with the client where they outlined their working methods and the theme of reflection (with a rather intriguing philosophical rationale)... but not an outcome.

Zogjani explains how they have developed a robust methodology informed by Neri Oxman's 'Krebs Cycle of Creativity' (Oxman 2017) and supported by their team's combination of art, design and philosophy training. Oxman's cycle proposes that creativity works across disciplinary boundaries, and that creativity within one domain effects change within another. This echoes the synthesis and evaluation of critical thinking, and moving between disciplines brings a supply of alternative concepts to use as design thinking's 'frames'. Furthermore, Kokrra have adopted Oxman's principles to define and implement a creative process without a known outcome, with the eventual product resulting from this being linked to the client's event in a lateral and metaphorical fashion, similar to the way in which the best-fit editing takes a project further from the starting point and produced metaphors within my methods. Instead of a bank of sketchbook work to ransack, they have a member of staff tasked with reading and generating philosophical ideas (or 'frames') from which to pick. The role of the team member with this philosophy/contemporary art specialism within their team may be to occupy (and therefore move *from*) another domain within the cycle, thus increasing the creative energy produced, to use Oxman's analogy.

But with a plan that didn't specify the outcome of the project, the question of trust hovered over the relationship with the client. Kokrra relied on the client inviting them to develop work for a month on the basis of their previous work. Zogjani references Frank Gehry in suggesting that it might be folly to let the client know that you don't know what you're doing, especially when the process which is your selling point has been largely intuitive until then and not yet formalized using reference points such as Oxman and Gehry. He reflects on the role of the materials prototype taken to the initial meetings for Dokutech as convincing the client that the project was feasible, in comparison to a similar pitch made subsequently to a different company without a prototype to anchor the proposal. This later proposal was unsuccessful, despite the sound conceptual basis and visualisations in tune with the time-based theme of the event (rather than a 2d representation of it) produced for the presentation. In reflecting upon this experience Zogjani suggests that the proposal might have been too lateral for a festival such as this (the frame too unfamiliar, perhaps) when the client expected a logo to distil the festival's identity.

Zogjani is well aware of the difficulty in promoting a business based on a design process with an unknown outcome, saying "the toughest part of this is trying to find a salesperson to sell this. In three years I haven't been able to explain this to a single salesperson... how do you

put this in a business case? Who is going to buy it? There is no target market for this type of offering because it's not an actual offer! So it's very weird." He goes on to suggest that being featured in a high-profile publication gives the project the visibility (and presumably the legitimization) that a potential client needs to trust them with this unknown way of working. He also suggests that packaging the company's work up in as simple a term as possible to promote their skills is helpful; calling it 'graphic design' is familiar and reliable. Through building up a track record of successful projects using this process they are beginning to persuade clients that commissioning work without a known outcome isn't such a gamble. In a reflection of design thinking's initial stage of defining the question, Zogjani says: "the process starts with a question. [...] One thing we are sure of is that there is always a potential solution."

Kokrra showed how the core of critical thinking runs through their practice, seeing them synthesizing viewpoints from entirely different disciplines as part of a clearly-articulated multidisciplinary, design process. The essential role of critical thinking is set out in no uncertain terms by Dam & Volman (2004: 375) as "an essential competence required by citizens to participate in a modern, democratic society; critical thinking enables citizens to make their own contribution to society in a critical and aware manner." And, crucially, equipping illustrators with critical thinking skills enables them to identify and articulate cause for complaint in contrast to the docility of Harris's future worker, and employ their design thinking skills to find solutions to the dystopian potential within the future of work that he alerts us to. Thus the illustrator is very much an empowered citizen as Kane hopes, with the content as well as the means to effectively contribute to society as Bowman and Zeegen urged. To draw this discussion to a close, I hope that by exploring two examples of projects from the wider creative workplace that illustrators are entering into I have shown that there is commercial viability for the methods I've proposed within this chapter. Despite the frictions arising from their perceived incompatibility with professional design (as noted by Zogjani), elements of these methods have been seen to be transferrable to the world outside academia in these examples. Additionally, they may have a role in developing illustrators as members of society who can adapt to and effect change, with the agency that results from their critical and design thinking. In this regard what is proposed here is in agreement with Healey & Jenkins (2009:124), who suggest that whilst this is of concern to those in academia in the main it has wider ramifications, claiming that: "Helping our students understand and cope with uncertainty, ambiguity, complexity and change is not just valuable to their development at university and after graduation, it may also be central to the future of humanity".

Conclusion

This chapter has sought to establish that some of the practical methods used within illustration practice to investigate the world and subsequently to communicate findings are commensurate with those of research as described within other research paradigms. This exercise gives us the terminology and the concepts with which to reflect upon illustration methods within non-academic research practice, and to renegotiate its link with the world it proposes to speak to and about. In doing so I have sought to address the concerns of critics within the illustration press by promoting more robust fieldwork that links illustration more soundly with the world.

The strength of this approach is that these methods produce outcomes that can communicate findings to the viewer, and illustration's communicative abilities can be utilized to a greater extent in academic research. Academia stands to benefit as much as

commercial practice from trusting the practice to lead projects in an inductive approach involving a responsive and emerging methodology. It enables the illustrator-researcher to be nimble and bring in previously unrelated ideas to a developing field. With regard to the commissioned strand of illustration, my proposal is that it can adopt research *in* illustration as research *for* illustration. This would be an interesting challenge to Scrivener's point that this is research with a small 'r' and does not generate knowledge (Scrivener 2010: 261). The relevance of these research methods to commercial and authorial work in the case of Kokrra's *Dokutech* project and Rodrigues and Elliott's *World in Motion* documentary is enough to suggest that a range of practices beyond academic research would benefit from rejecting the deductive approach familiar to many commissions, for it does not encourage a deeper understanding of the illustration's subject matter or an alternative view of it. It recycles what we already think we know and puts it into circulation visually.

The relationship between the research process discussed here and broader research paradigms appears to fluctuate according to the needs of the task at hand, and crossing paradigms unproblematically within practice is useful to note. The benefit to illustration of adopting a range of positions throughout the research is that it gives the illustrator-researcher a more comprehensive understanding of the phenomenon of interest, and raises the issue of responsibility in relation to it. Furthermore, in research terms Collins (2010) argues that research paradigms are socially constructed, and therefore the relationships between paradigms and between paradigm and methodology are constantly being negotiated, and the discussion of methods in publications such as this contributes to that. Therefore, for example, where Gray and Malins propose artistic research has its own paradigm, mixed-methods or multi-methods designs drawing on both qualitative and/or quantitative methods from competing paradigms may be the most effective solution whilst the paradigm is under construction. It foregrounds the demands of practice whilst the different strands within illustration research are still being excavated and developed.

Foregrounding the role of practice is to be found in Haseman's 'performative paradigm' for creative arts, where outcomes enact the argument (Haseman 2006, 2007). Where visual communication offers sophisticated tools for balancing complementary text and image within a holistic communication, there are opportunities to use these to address some of the resistance still felt that MacLeod (2000) wrote of in relation to the location of the argument. Within a field where practice *can* communicate, opportunities are opened up for adopting an appropriate format for providing a range of levels on which to approach the argument. This point is particularly relevant to illustration, where Haseman's suggestions can be read as a call for the alternative use of images within written outcomes concerning illustration. These research outcomes need not jettison words or numbers in favour of symbolic data (such as images). It is precisely because it is a combination of these that could make it performative and accessible. Broadening the range of levels on which the outcomes communicate is of relevance to research (and field) concerned with the viewer/reader, and also to wider concerns with research accessibility and impact. Haseman quotes Gergen and Gergen (2003: 582–83) to outline the benefits clearly: 'in moving towards performance the investigator avoids the mystifying claims of truth and simultaneously expands the range of communities in which the work can stimulate dialogue' (Haseman 2006: 101). Illustration is fluid in its selection of media for communication, and can explore more performative forms that facilitate this expanded dialogue. Making our research outcomes accessible to an audience beyond academia in such a way shows that research can learn from illustration practice, just as research offered the methods to help cultivate outward-looking and resilient illustrators. Investigating how the methods and concepts discussed here are negotiated within further examples will be of great use for developing our understanding of

how to practice, teach and research this intriguing field. In turn, I hope those examples will represent the continued flexibility and agency of illustrators, leading to a diverse workplace for them and all those who encounter their work.

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